

### ABSTRACT

The present invention is directed to a novel multi-spectral contrast agent-enhanced polarized light imaging technique that enables rapid imaging of large tissue fields. The imaging device includes a tunable monochromatic light source and a CCD camera. Linear polarizers are placed into both the incident and collected light pathways in order to limit the measurement volume to the superficial tissue layers. To enhance the tumor contrast in the image, aqueous solutions of toluidine blue or methylene blue are topically applied.